Chapter 9

Urban Combat Service Support

Even supply is different. While deliveries do not need to be made over great distances, soft vehicles are extremely vulnerable in an environment where it is hard to define a front line and where the enemy can repeatedly emerge in the rear. All soldiers will be fighters, and force and resource protection will be physically and psychologically draining. Urban environments can upset traditional balances between classes of supply. . . . [a] force may find itself required to feed an urban population, or to supply epidemic-control efforts. . . . [a]ll combat service support troops are more apt to find themselves shooting back during an urban battle than in any other combat environment.

Ralph Peters
"Our Soldiers, Their Cities"

Combat service support (CSS) capabilities exist to enable the Army to initiate and sustain full spectrum operations. CSS is a major component of sustaining operations and provides the means for commanders to build and maintain combat power. Sustaining operations are inseparable from decisive and shaping operations. In offensive and defensive operations, they are not by themselves likely to be decisive or shaping; however, they contribute to those operations. In some stability operations and most support operations, when the critical objectives may be restoring the infrastructure and the welfare of civilians, CSS forces can often be the decisive

CONTENTS

element. Their success will allow Army forces to *dominate* this complex environment. However, like all urban operations (UO), CSS operations affect and are affected by the environment. The urban terrain, infrastructure, and existing resources, coupled with supportive civilians, may facilitate CSS operations. In contrast, a poorly designed or damaged infrastructure and a hostile population may severely hamper CSS operations. In the latter case, critical Army resources required elsewhere in the area of operations (AO) may be diverted to repair facilities and control and support the inhabitants of the urban areas.

URBAN CSS CHARACTERISTICS

9-1. CSS characteristics (see Figure 9-1) guide prudent logistic planning regardless of the environment. They provide commanders an excellent framework to analyze and develop urban logistic requirements, assess the impact of the environment on the provision of CSS, and gauge the effectiveness of urban CSS support.

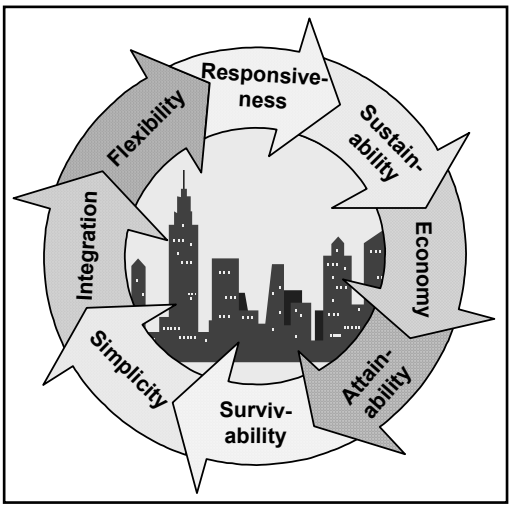

Figure 9-1. CSS Characteristics

RESPONSIVENESS AND SUSTAINABILITY

9-2. UO require responsiveness and sustainability to establish and maintain the tempo necessary for success. Responsiveness—providing the right support in the right place at the right time—is the essential CSS characteristic. It requires that CSS commanders and planners accurately forecast urban operational requirements. Continuous urban operations will drain personnel, equipment, and supplies (based on history, this can be more than five times that experienced in other environments). Therefore, sustainability—the ability to maintain continuous support throughout all phases of the operation—will be a significant concern. Anticipation is critical to both responsiveness and sustainability. It requires that CSS commanders and planners comprehend the potential effects that the components of the urban environment (terrain, infrastructure, and society) may have on operations and CSS, either benefiting or impeding UO. Effective urban operational and logistic planning cannot be accomplished separately. Operational and CSS planners, as well as CSS operators, are closely linked to aid in synchronizing and attaining responsiveness and sustainability.

ECONOMY AND ATTAINABILITY

9-3. A thoughtful assessment and understanding of the urban environment can also help determine how specific urban areas can contribute to or frustrate the achievement of economy and attainability. Economy is providing

the most efficient support at the least cost to accomplish the mission. Attainability means generating the minimum essential supplies and services necessary to begin operations. If available, obtaining support in the AO costs less than purchasing the supplies outside the area and then transporting them there. Critical resources may be available in urban areas to support the operation. However, relying on sources outside the established military logistic system may create conflict with other CSS characteristics. A strike by longshoremen, for example, may shut down port operations (at least temporarily) lowering responsiveness and sustainability.

SURVIVABILITY

9-4. Survivability is being able to protect support functions from destruction or degradation. Commanders often choose to locate CSS functions in an urban area because the buildings may better protect and conceal equipment, supplies, and people. Urban industrial areas are frequently chosen as support areas because they offer this protection as well as sizeable warehouses, large parking areas, and materials handling equipment (MHE). Such areas facilitate the storage and movement of equipment and supplies. They also provide readily available water, electricity, and other potentially useful urban resources and infrastructure. However, these areas may also contain toxic industrial materials (TIM) (see the discussion of industrial areas in Chapter 2). These materials and chemicals in close proximity to support areas may unjustifiably increase the risk to survivability, especially any CSS facilities located in subsurface areas (liquids and heavier gases often sink and accumulate in low-lying areas). Furthermore, CSS activities located in any type of confined urban areas can offer lucrative targets for terrorists or even angry crowds and mobs. Although host-nation support may include assets to assist in defending CSS units and lines of communications (LOCs), CSS commanders carefully consider if adequate protection measures can ensure survivability.

Base Security: Tan Son Nhut, Vietnam – Tet 1968

Colonel Nam Truyen was the commander of the 9th Vietcong Division who planned and conducted the attack on the US airbase at Tan Son Nhut during the 1968 Tet Offensive. He had previously entered the airbase during the 1967 Christmas cease-fire using forged identity papers to conduct his own personal reconnaissance.

SIMPLICITY

9-5. Simplicity is required in both planning and executing CSS operations in this complex environment. Developing standard procedures among the Army, other services, and especially civilian governmental and nongovernmental agencies; of liaison and open channels of communication; between simple plans and orders; and extensive rehearsals contribute immeasurably to attaining this necessary characteristic.

INTEGRATION

9-6. The need for CSS integration increases in urban operations due to the joint nature of UO and greater numbers of other governmental and nongovernmental agencies operating in or near urban areas. More nongovernmental organizations (NGOs) will likely exist because urban areas often contain most of a region's population. Most NGOs focus on people. Army forces and other military and nonmilitary groups cooperate and coordinate their actions. Much of their coordination will revolve around logistics. Cooperation and coordination will take advantage of each group's logistic capabilities, help to avoid duplicated effort (contributing to economy), and create logistic synergy. It will also help to curtail competition for the same urban resources and assist in developing a unified list of priorities. Such coordination will help ensure that other operations by one force or agency will not disrupt or destroy portions of the urban infrastructure critical to another's logistic operations and the overall mission. (See the discussion of coordination with other agencies included at the end of Chapter 4.)

FLEXIBILITY

9-7. Lastly, commanders develop flexibility. Although they and their staffs thoroughly understand the urban environment essential to planning CSS operations, they cannot anticipate every eventuality. Urban commanders possess the ability to exploit fleeting opportunities. Knowledge of the environment, particularly its infrastructure, can aid in developing innovative solutions to CSS acquisition and distribution problems. Flexibility enables CSS personnel to remain responsive to the force commander's needs.

9-8. The force and CSS commanders consider and prioritize these characteristics as they visualize UO. Each characteristic does not affect every operation and urban area in the same way. The CSS characteristics seldom exert equal influence, and their importance varies according to mission, enemy, terrain and weather, troops and support available, time available, civil considerations (METT-TC). Like the principles of war, commanders do not ignore the potential impact of CSS characteristics and how their influence changes as the operation evolves (see FM 100-10).

LOGISTICS PREPARATION OF THE THEATER

9-9. A thorough logistics preparation of the theater (LPT) is critical for an adaptable UO logistic support plan. CSS planners conduct the LPT to *assess* the situation from a logistic perspective and determine how best to support the force commander's plan. CSS planners understand the urban environment, the fundamentals of UO, and the urban environment's effects on combat service support (as well as the other battlefield operating systems). Such knowledge allows the planners to develop a detailed estimate of support requirements. A thorough LPT helps commanders determine the most effective method of providing adequate, responsive support to meet support estimates while minimizing the CSS footprint. Overall, it helps tie together UO requirements with acquisition and distribution. As with all operations, but particularly in a dynamic urban environment, this assessment process is continuous since requirements will change as the urban operation unfolds and matures.

SUPPORT TO IPB

> *CSS planning accounts for increased consumption, increased threats to lines of communications, and anticipated support to noncombatants. . . . Urban operations place a premium on closely coordinated, combined arms teams and carefully protected CSS. Urban operations are CSS-intensive, demanding large quantities of material and support for military forces and noncombatants displaced by operations.*
>
> FM 3-0

9-10. The LPT resembles and runs parallel to the intelligence preparation of the battlefield (IPB). Products generated under IPB may be useful in the logistic analysis. Conversely, the LPT may contribute to the IPB by identifying critical resources and infrastructure and assessing their potential to influence (positively or negatively) the operation plan. This information may warrant a course of action that includes offensive or defensive operations to seize, secure, or destroy those critical resources. In UO initially planned for other than logistic reasons, the information may require altering the plan or imposing additional constraints to protect the identified resources. These resources may or may not be critical to current operations; they are usually important to set or *shape* the conditions necessary for Army forces to *transition* to subsequent missions or redeploy. This close relationship between IPB and LPT underscores the need to quickly and continuously involve CSS personnel for their logistic expertise and perspective in planning UO.

URBAN LOGISTIC INFORMATION

9-11. Figure 9-2 illustrates that a thorough analysis of the key components of urban areas in the commander's AO provides the data for an accurate LPT and subsequent UO logistic support plan (see Chapter 2 and Appendix B). Analyzing the urban terrain and infrastructure helps to determine—

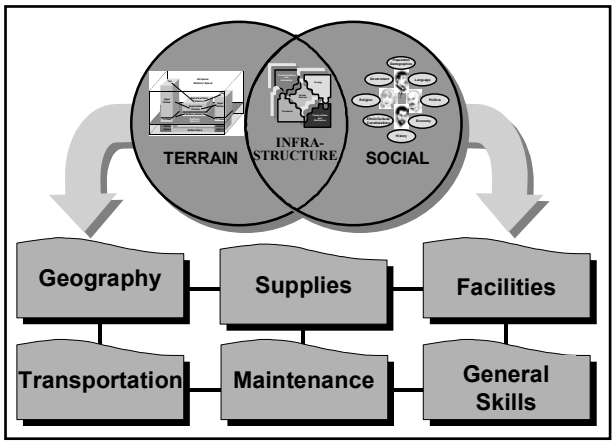

Figure 9-2. The Urban Environment and Essential Elements of Logistic Information

- *Geographic* influences on consumption factors and on the provision of support (weather, climate, and topography).
- The availability of *supplies*, such as safe food, potable water, petroleum, electrical energy, barrier material, and compatible repair parts.
- The location of *facilities*, such as warehouses, cold-storage sites, manufacturing plants, hospitals, and hotels for billeting.
- *Transportation* information, such as airfields, rail and road networks, traffic flow, choke points, and control problems.

- Locations and accessibility of *maintenance* facilities and equipment, and machine works for the possible fabrication of parts.
- The available *general skills* among the urban population, such as linguists, drivers, MHE operators, and longshoremen.

POTENTIAL RESTRICTIONS

9-12. Commanders are aware of restrictions that apply to the use of some non-US resources. Security and requirements for US national control dictate that only US assets may perform certain services and functions. Therefore, some *foreign* urban area capabilities, even if abundantly available, may not be used. These might include—

- Command and control of medical supply, service, maintenance, replacements, and communications.
- Triage of casualties for evacuation.
- Treatment of nuclear, biological, and chemical (NBC) casualties, as well as the decontamination of US equipment, personnel, and remains.
- Identification and burial of US dead.
- Veterinary subsistence inspection.
- Law and order operations over US forces and US military prisoner confinement operations, as well as accountability and security of enemy prisoners of war in US custody.

URBAN SOCIETAL CONSIDERATIONS

9-13. As in all aspects of UO, the urban society is a critical element of the LPT analysis. CSS planners cannot simply determine what urban resources exist in the AO. They also assess whether they can acquire and use those resources without overly disrupting the urban society and their environment. If the resources are only sufficient for its inhabitants (and dependent populations in outlying areas), and the facilities cannot increase production to accommodate the needs of Army forces, then commanders may not rely on those resources to support their operations. In fact, the opposite may be true. The effects of UO on the inhabitants, particularly during offensive and defensive operations, may place increased burdens on the Army's resources. Logistics civilian augmentation program (LOGCAP) contractors represent a potential source of critical LPT planning information. LOGCAP contractors may already have an established presence in the urban area and can provide real-time information on potential resources. In some UO, especially support operations, the LPT analysis is essential in determining the resources that commanders supply and the services they restore to accomplish the mission.

9-14. CSS planners also consider the urban society's ability to restore their own facilities and provide for themselves (if necessary with assistance from Army forces). Throughout this analysis, civil affairs (CA) units can advise and assist in identifying and assessing urban supply systems, services, personnel, resources, and facilities. Critically, commanders understand that purchasing local goods and services may have the unintended consequence of financially sustaining the most disruptive and violent factions in the area. Army forces seek to purchase urban products and services that will not contribute to prolonging the conflict or crisis. In many stability operations or support operations, they also attempt to distribute the contracts for goods and

services purchased locally as fairly as possible among urban factions and ethnic groups to maintain impartiality and legitimacy. As part of their coordination efforts, commanders attempt to achieve the cooperation of relief agencies and other NGOs in this endeavor.

9-15. Finally, CSS planners also identify potential threats and increased protection requirements that the urban society (criminals, gangs, and riotous mobs) may present, particularly when CSS units and activities are located in urban areas. The disposition or allegiance of the urban population is also important to consider. The infrastructure of an urban area may exhibit great potential to support the logistic efforts of Army forces, but if the population is hostile or unreliable, the resources may be unavailable.

SUPPORT AREAS

9-16. A major influence on the operation plan and its subsequent execution is often the proper identification and preparation of support areas. The LPT helps commanders determine the need, advantages, and disadvantages of using urban areas in the AO as areas from which to provide support and conduct distribution operations. Ideally, these areas support reception, staging, onward movement, and integration operations. They allow easy sea and air access, offer adequate protection and storage space, facilitate the transfer of supplies and equipment, and are accessible to multiple LOCs. Consequently, commanders often establish support areas near seaports and airports that are part of a larger urban area. However, threats recognize the Army's need for ports and airfields and may devote substantial resources and combat power to defend them. Therefore, planners may determine during the LPT that the risks of seizing or establishing urban lodgment areas may be too high (see Chapter 4). Instead, they may recommend building an airfield, conducting logistics over-the-shore operations, or constructing logistic bases in more isolated locations.

OVERALL ASSESSMENT

9-17. As shown above, the LPT process and analysis help to determine if urban areas in the AO—

- Are suitable as areas for support.
- Can contribute sufficient quantities of and are a dependable source for resources for the overall operation.
- May additionally drain the supported commander's resources.

The results of this process serve as a basis for reviewing requirements for civilian contract support and host-nation support and for developing CSS input into time-phased force and deployment data. This chapter focuses on the effects urban areas may have on accomplishing CSS functions and related activities, particularly when CSS units and activities are in urban areas.

CSS FUNCTIONS

9-18. CSS consists of multiple functions necessary to fuel, arm, fix, and man combat systems. Similar to the components of the urban environment, particularly its infrastructure, they overlap and are interdependent (see Figure 9-3 on page 9-8). The success of one function depends on the success of

several others. Like urban infrastructure, they have two components: a physical component (supplies, equipment, and facilities) and a human component (the personnel who execute these functions). Like city mayors, commanders plan, manage, and synchronize these functions to provide responsive and efficient CSS for UO.

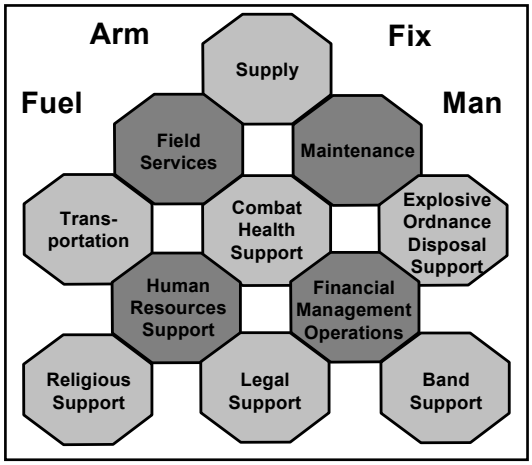

Figure 9-3. CSS Functions

9-19. Commanders and planners consider two essential aspects when addressing these CSS functions. One aspect looks outward and one looks inward. The first aspect is how these functions can best support full-spectrum UO—the outward analysis. The second aspect is how the urban area affects the conduct of CSS functions, particularly when those functions are located or performed in an urban area—the inward analysis.

SUPPLY

9-20. The supply function involves acquiring, managing, receiving, storing, protecting, maintaining, salvaging, and distributing all classes of supply (except Class VIII) required to equip and sustain Army (and joint) forces. In UO, commanders of major operations may need to make decisions early in the planning cycle. They decide whether to stockpile supplies forward or to rely on velocity management and scheduled and time-definite delivery to satisfy requirements. Some specialized items identified below may not be available through the normal military supply system and may take logisticians much longer to obtain or fabricate. Operation planners quickly identify the special equipment and increased supply requirements for UO to give logisticians time to acquire them.

> *Greater friendly force density would appear to make the providers' task easier. Logic would seem to dictate that more supported units in less space would translate to fewer nodes that require support, or at least less distance between a similar number of nodes than would be found on more open terrain. But the service supporter frequently finds the opposite is the case. . . . one is often not directly accessible from another due to enemy fires or physical barriers.*
>
> *On the Shoulders of Atlas*

Increased Urban Supply Requirements

9-21. Urban offensive and defensive operations will often increase requirements for Class V. Ammunition consumption rates have been five to ten times greater than operations in other environments. As such, urban combat operations will require a constant flow of ammunition. These operations will

require more small arms and heavy machine guns; tank, antitank, mortar, attack helicopter, and field artillery ammunition (especially precision munitions); and mines, grenades, and demolitions.

9-22. With the potential exception of aviation fuel, Class III requirements for UO generally decrease at the maneuver unit level. Increased fuel requirements for engineer and power-generating equipment attached to or operating with forward units may offset these decreases. However, units may obtain tested fuel in the urban area (refinement facilities, gas stations, garages, and airfields).

9-23. Class IV will be in great demand in all types of UO to include large quantities of lumber (and the power tools to cut it) to reinforce positions and to bar access to windows and doorways. This lumber may come from outside the urban area or obtained by dismantling existing buildings and structures. Army forces use discretion, minimizing collateral damage, preserving critical infrastructure, and understanding the human dimension before they disassemble buildings. Some structures may be required to support operations or the civilian population during subsequent stages. Forces avoid structures of religious or cultural significance to prevent turning portions of the urban population against US operations and erode legitimacy. Other construction material will also be in high demand during relief operations to repair buildings and infrastructure damaged during the disaster. Class IV may also include specialized, prefabricated road barriers or collapsible wire-mesh or fabric cribs that can be filled with sand, rock, or dirt. They create barricades used to block roads, reinforce defensive positions, and protect headquarters and logistic activities.

9-24. Across the spectrum of UO, potable water may be a critical concern. Planners may need to ensure that additional containers for water (and fuel) are available to support dispersed stock at small-unit level. Units may need to increase levels of Class I and X supplies to support the urban population, particularly in urban stability operations and support operations. Soldiers may need more Class II, especially clothing and individual equipment, as exposure to the urban environment (concrete, glass, and steel) causes rapid wear. The chemical threats posed in UO may require pre-positioning large stocks of chemical protective clothing, defensive equipment, and decontamination apparatus. Units will also require items such as rope, grappling hooks, crowbars, ladders, chain saws, elbow- and kneepads, special vehicle and personnel body armor, fire-fighting equipment, packboards, and other specialized items to conduct operations.

Storage and Distribution

9-25. UO that are primarily stability operations or support operations may be able to rely entirely upon the Army's responsive, distribution-based CSS. Urban offensive and defensive operations can be part of an overall urban operation considered primarily a stability operation or support operation. In the past, these operations required both the attacker and the defender to prestock as many supplies as possible, particularly critical items. Defending forces recognize that the attacker will seek to isolate them from sources of supply; they ensure that they have enough supplies to execute the defense and restore their LOCs. Successful isolation of an urban area by the attacker

ultimately results in a supply shortage and defeat. Complete isolation of a defender is difficult, especially if the urban area is large and the urban civilians support the defending forces. Nonetheless, attacking forces will seek, at a minimum, to interdict the defender's resupply operations. Although the isolation may be effective and the defense eventually fails, stockpiling supplies in this situation contributes to the defense.

9-26. Attacking forces may also want to stockpile supplies. This assists in maintaining the necessary tempo for a successful urban offensive. It can reduce the frequency with which supplies are moved over exposed LOCs. Stockpiling for offensive operations is not as common a technique as in the defense. Commanders review if they have the storage facilities and transportation assets (equipment and personnel) available.

9-27. Commanders weigh the benefits of stockpiling resources forward against relying on the Army's distribution-based sustainment system. Stockpiling brings supplies close to urban forces and helps ensure available supplies to support the tempo of UO. However, this method may burden the support structure that moves, handles, and protects large quantities of resources often on a repetitive basis. The Army's normal distribution-based CSS reduces this burden significantly; however, available transportation assets (sea, air, and ground) impacts delivery response times. These transportation assets often combine military assets overlaid on the host nation's (and urban area's) transportation and distribution infrastructure. Although the civilian infrastructure may initially support the Army's distribution system, later effects of UO, such as destruction of equipment and facilities or loss of civilian workers, may degrade the system. Army forces may have to share these assets with other military, civilian, and multinational forces or organizations participating in the urban operation, as well as with civilians. This shared system also puts at risk the timely delivery of critical supplies to Army forces.

9-28. CSS planners understand the urban environment and its effects on the proposed method of distribution. They also understand how urban operations (to include CSS UO) may affect the urban environment. Storing bulk fuel in or near an urban area, for example, may increase the risk of fire hazard to civilians and Army forces. With this awareness, planners present the force commander with an estimate that considers both risks and benefits. Depending on the particular area and other METT-TC factors, they may recommend one method of distribution later transitioning to another or a combination of methods. To be viable, the overall concept of logistic support, to include supply distribution, enables urban commanders to generate enough combat power to conduct decisive and shaping UO when and where required, and at a tempo faster than the threat can react.

9-29. During urban combat operations, the "push system" of supply distribution often works best to maintain the tempo of UO. Under this system, planners estimate supply requirements and arrange to have supplies delivered in preset packages (normally strategic, mission, unit, or combat configured loads). This method prevents critical delays of a "pull system" that requires units to request supplies and then await their arrival. The "best" method for tactical UO will be a combination of the two.

FIELD SERVICES

9-30. Field services involve feeding, clothing, and providing personal services for soldiers. It consists of food services, mortuary affairs, aerial delivery, laundry, shower, and textile repair. The urban commander determines the need and priority of each service after careful METT-TC analysis. Some facilities such as shower, laundry, and cold storage may be available in the urban area. Additionally, requirements to care for the urban population will increase requirements for field services immensely. In some circumstances, most notably urban support operations, field service units or activities will be critical and may be the only support provided.

Food Preparation

9-31. The feeding standard for soldiers operating in urban areas remains the same: three quality meals per day. Urban combat makes higher energy demands on soldiers who require a caloric intake of about 5,000 calories per day. Producing and delivering prepared meals to forward elements may be impossible or may be improved due to the urban environment. The area may contain facilities that aid in food storage and preparation that Army forces can use speeding transition to prepared rations. On the other hand, the threat situation (which may include the urban populace), rubble and other obstacles, and isolated and dispersed forces may prevent transporting and delivering prepared meals even if the capability to prepare meals is enhanced. Food (and water) may be available in the urban area; however, local sources must be tested, carefully monitored, and medically approved before consumption. Garbage disposal may be an important consideration in the urban area. Improper trash disposal may leave a signature trail (particularly during urban defensive operations) that may produce or worsen unsanitary conditions leading to increased disease and nonbattle injuries (DNBIs). Commanders understand that food operations, if not properly positioned and secured, can become a focal point for the urban population. Strict policy regarding distribution and control of any Class I supplies (including waste products) will be enforced. Black marketeers will be attracted to Army food service activities as well (even during offensive and defensive operations).

Water Purification

9-32. Water is essential; it is necessary for life, sanitation, food preparation, construction, and decontamination. Furnishing potable water is both a supply function and a field service. Water purification is a field service, normally performed with the storage and distribution of potable water—a supply function.

9-33. **Vigilant Monitoring.** Urban areas will often have a ready source of water to support the urban inhabitants and its infrastructure. However, this water may not be potable for US and allied forces (though the urban population may have developed immunity toward its microorganisms). The higher concentration of TIM in urban areas compounds this problem, as ground water is highly susceptible to chemical contamination, even supplies located miles away from the source of contamination. US soldiers are trained and cautioned against using water from an urban area (to include ice and bottled water) until preventive medicine and veterinary personnel can determine its

quality. When water quality is unknown, commanders ensure use of tactical water purification equipment that will unquestionably upgrade it to Army water quality standards. Even if initial testing indicates the urban water is safe for Army forces, personnel continuously monitor the water quality. However, Army water purification, storage, and transportation requirements for UO can be greatly reduced if the existing urban water supply can be integrated into CSS operations. An early assessment of the feasibility of this course of action is critical to CSS planning.

9-34. **Greater Requirements.** Individual water requirements are greater for soldiers operating in an urban environment due to increased levels of exertion. Offensive and defensive UO are often intense and can produce more casualties, including civilians. Consequently, medical facilities, already consumers of large volumes of water, may require even more water. Water purification, particularly in the urban areas of developing nations and during urban disaster relief operations, will be a critical and constant concern for Army forces.

9-35. **Potential Key Terrain.** Sites that can control the water of the urban area may be key terrain, providing not only a resource for Army forces, but also a means to control the threat, the civilians, or both. These sites may be the sources of the water—the river, lake, reservoir, or storage tanks—or the means that process and transport the water—pipelines, pumping stations, or treatment facilities. Many sites may be outside the urban area, as many large urban areas draw water from distant sources. The seizure of a pumping station or pipeline may make it possible for commanders to control water supplies without expending resources required to enter the urban area. To preserve critical infrastructure, commanders may increase security to protect these locations from contamination or destruction. Engineers also may need to restore, maintain, or operate existing water facilities damaged by the threat or disaster and to drill new wells and construct new water facilities.

Mortuary Affairs

9-36. Mortuary affairs provide the necessary care and disposition of deceased personnel. It supports the Army across the spectrum of operations. It may directly and suddenly impact (positively or negatively) the morale of the soldiers and the American public and may influence relations with the civilian population in the AO. It can also affect the health of soldiers and the urban populace. Commanders plan evacuation routes and temporary collection and internment sites, trying to adhere to local customs and traditions to lessen potential negative consequences.

9-37. Units are responsible for recovering the remains of their own fatalities and evacuating them to the closest mortuary affairs collection point, usually located at the nearest support area. Because of the density of noncombatants in UO, commanders may also find themselves responsible for civilian remains. Deaths of civilians under Army control, such as urban evacuees and refugees at Army-operated sites, often obligate the Army to care for their remains including medical certification and records of death. High-intensity urban combat may result in civilian deaths, and health concerns will require Army forces to deal with civilian remains expeditiously. Commanders consult local religious leaders, the Staff Judge Advocate (SJA), CA personnel, and

chaplains to verify that they are abiding by law and customs. Overall, commanders ensure that forces treat all deceased, including civilians, with dignity and respect (another important aspect of adhering to the urban fundamental of understanding the human dimension).

Aerial Delivery

9-38. Aerial delivery is the movement by fixed- or rotary-wing aircraft and delivery by the use of parachute or sling load of soldiers, supplies, and equipment. As a vital link in the distribution system, it adds flexibility and provides the capability of supplying the force even when urban ground LOCs are disrupted. Forces use aerial delivery to deliver supplies and equipment when no other means can. However, in support operations it is used extensively to move supplies to meet the urgent needs of a population in crisis. In all UO, delivery aircraft are highly vulnerable to small arms, rockets, and air defense systems. A threat may further decrease an already limited number of urban drop zones (aircraft may be able to avoid air defense systems, but ground forces may not be able to secure the drop zone and retrieve the cargo). Equipment and supplies transported by helicopter sling-load lessen the latter disadvantage. There are usually more available sites to deposit sling loads, such as rooftops (engineers will be critical in determining the structural integrity of rooftops for landing helicopters), parking lots, and athletic fields. However, load instability during flight may restrict a helicopter's airspeed and maneuver capabilities making it more vulnerable to small arms and man-portable air defense systems. For all these reasons, aerial delivery of supplies in UO may be much less efficient than in many other environments.

Laundry, Shower, and Light Textile Repair

9-39. Soldiers are provided clean, serviceable clothing and showers for hygiene and morale. A field services company provides direct support at the tactical level. During UO, other sources such as fixed urban facilities obtained via host-nation support and contract services may provide these services.

MAINTENANCE

9-40. Maintenance entails keeping materiel in operating condition, returning it to service, or updating and upgrading its capability. It includes recovering and evacuating disabled equipment; replacing forward; performing preventive maintenance checks and services (PMCS); increasing battle damage assessment and repair (BDAR); and analyze potential resources for maintenance in the urban area.

Rapid Recovery Essential

9-41. Disabled vehicles easily block narrow thoroughfares during urban offensive, defensive, and some stability operations. This makes rapid recovery operations essential. Hastily secured unit maintenance collection sites near the damaged equipment and along supply routes are necessary to avoid clogging limited LOCs and mounted avenues with vehicle evacuation operations. The task organization of armored units into smaller attachments (often platoon-sized or smaller) will strain limited recovery assets. Units maintain centralized and responsive control over these potentially critical resources.

Replace Forward

9-42. One of the guiding maintenance principles is to replace forward and fix rear. Maintenance activities, with a forward focus on system replacement, task and use the distribution and evacuation channels to push components and end items to the sustainment level for repair. However, the conditions of UO may make distribution and evacuation difficult. Fixing equipment on site is extremely important in UO. Organizational maintenance personnel accurately evaluate damage to their equipment. Recovery of equipment will prove difficult. When recovery is required, equipment is moved only as far rearward as the point where repairs can be made. When selecting a maintenance site, commanders consider: security, a sufficient area around equipment for lift or recovery vehicles, and use of existing maintenance facilities or garages.

9-43. The unforgiving urban terrain will invariably increase damage to man-portable weapons and equipment, particularly electronic equipment sensitive to jarring. Although by definition man-portable weapons and equipment are easier to transport, evacuating these systems may prove as difficult as evacuating vehicles and larger, heavier equipment. Therefore, unit or direct support maintenance support teams (MSTs) will frequently need to repair equipment at (or as near as possible to) the point where it was damaged. Equipment operators are responsible to properly diagnose the fault or damage. Such action ensures that the correct repair parts and maintenance personnel are sent forward to complete necessary repairs. In UO, particularly offensive and defensive operations, units may need to replace rather than repair equipment, requiring CSS personnel to plan for increased replacement of what might normally be repairable equipment, as well as increased repair parts for man-portable items.

Add-On Protection Increases Wear

9-44. Maintenance units may need to attach additional armor to both wheeled and tracked vehicles operating in an urban environment to increase protection against small arms, mines, rocket-propelled grenades, and lightweight antiarmor weapons. (Units can also sandbag vehicles to achieve a degree of increased protection.) These modified vehicles, however, may put excessive wear on brakes, springs, suspension, and tires (already vulnerable to the increased amount of debris caused by many UO). After several months, these same vehicles may experience severe damage to major assemblies, such as engines and transmissions. The increased protection proportionally increases repair parts and command emphasis toward inspecting these items

during daily operator PMCS. Commanders employing this additional protection may also consider increasing the number of scheduled services.

Increased Battle Damage Assessment and Repair

9-45. In UO, operators, crews, MSTs, and recovery teams execute BDAR far more than in other environments. BDAR quickly restores minimum essential combat capabilities for a specific mission (normally of short duration) or allows the equipment to self-recover by expediently fixing or bypassing components. Commanders may need to authorize supervised battlefield cannibalization and controlled exchange when units lack critical parts or cannot bring them forward.

Potential Urban Maintenance Resources

9-46. Although urban areas can complicate maintenance, they may contribute to this CSS function. Analyzing the urban area in the commander's AO may reveal potential sources of parts, tools, equipment, and facilities necessary to fix equipment and fabricate critical parts. Urban areas may serve as key sources for parts and facilities (and contract personnel) to repair automation and network communication equipment.

TRANSPORTATION

9-47. Transportation supports the concept of the urban operation by moving and transferring units, soldiers, equipment, and supplies. Transportation incorporates military, commercial, supporting nation, and urban area capabilities to build a system that expands to meet the needs of the force. Transportation includes movement control, terminal operations, and mode operations.

9-48. Urban areas are often critical to transportation operations. These areas may serve as a lodgment or support area for entry of Army forces and sustainment supplies. The existing transportation and distribution infrastructure may be essential to reception, staging, and onward movement. Contracts and host-nation support agreements may greatly increase the ability of Army forces to use the urban area's facilities, which may include docks, airfields, warehouses, and cargo handling equipment. Urban support may also include skilled urban workers, such as longshoremen and MHE operators.

Urban Terminals

9-49. In addition to serving as major seaports and aerial ports of debarkation, other urban areas may provide additional terminals in the AO. Forces may use these terminals for further staging, loading, discharging, and transferring the handling between various inland transportation modes and carriers (motor, air, rail, and water). These urban terminals—with synchronized movement management—permit commanders to rapidly shift transportation modes and carriers. Such action increases flexibility and ensures the continued forward movement of equipment and supplies to influence the tactical situation. Movement control, particularly in urban areas, relies heavily on support from military police in their maneuver and mobility support role. Without this support, urban LOCs may become congested, hinder movement and maneuver, and degrade force effectiveness (see FM 3-19.4). Urban commanders may need to establish multiple roadblocks and traffic control posts,

restrict selected roads to military traffic, and reroute movement to unaffected road networks when civil support and refugee control operations compete for available routes. Military police operations are critical in this regard and will require continuous, close coordination with urban civilian police.

Obstacles to Ground Transportation

9-50. Although urban areas can contribute to transportation operations, rubble and other damage can become obstacles to ground movement. Even in an undamaged urban environment, road and bridge weight restrictions may limit transportation operations. Urban route maintenance, to include reinforcing bridges, may become a priority task for engineer units. Bypassed pockets of resistance and ambushes pose a constant threat along urban supply routes. Urban LOCs will often require increased security in the form of continuous route security operations, regular (daily, if necessary) mine clearance operations, numerous observation posts, and a larger, more mobile tactical combat force. Such security increases manpower requirements for sustaining operations and potentially reduces resources from decisive operations. Moving critical supplies may require heavily armed convoys or lightly armored vehicles instead of trucks. Drivers are well trained, rehearsed, and alert. They can recognize and avoid potential mines and minefields (such as driving in the same tracks as the vehicle in front) and can react rapidly to ambushes. (In addition to the measures above, Russian convoys during their operations in Chechnya were not allowed to move without attack helicopter escort and the availability of immediate close air support.) Aerial resupply alleviates problems due to ground obstacles, but the air defense threat and proximity of threat forces may preclude their routine use.

Population Effects

9-51. The ability of Army forces to use vital urban transportation facilities depends largely on the civilians and the threat. The civilian population can affect the transportation system if they do not support the goals of Army operations. Urban transportation systems—such as ports, railroads, and rivers—require many specialists to operate. Without these specialists, the system's utility is degraded and may not function at all. In urban stability operations or support operations, Army forces will share the system with civilians and other agencies. Civilian authorities may refuse to allow Army forces to use any portions of an urban area's transportation system. Negotiating for access to that system under these circumstances then becomes a command priority.

Threat Effects

9-52. The threat can significantly affect urban transportation systems. Many are composed of smaller subsystems. Each subsystem is vulnerable to attack, which in turn often shuts down the whole system. A large canal system, for example, may have entrance and exit facilities, the canal itself, a means to pull the vessel along such as a locomotive engine, and the civilians that run each of these subsystems. Both an attacker and defender understand the components of the particular transportation system. If important to their current or subsequent operations, defending forces then develop plans and allocate forces to protect these subsystems. Attacking forces, on the other hand, often avoid collateral damage to the system, while simultaneously preventing enemy destruction of the facilities.

COMBAT HEALTH SUPPORT

9-53. Combat health support (CHS)—

- Encompasses all activities that prevent DNBIs.
- Clears the urban area of casualties.
- Provides for forward medical treatment and en route care during medical evacuation.
- Ensures that adequate Class VIII supplies and medical equipment are available.
- Provides required veterinary, dental, and laboratory services.

CHS operations minimize the effects of wounds, injuries, disease, urban environmental hazards, and psychological stresses on unit effectiveness, readiness, and morale. Effective UO require acclimated soldiers trained in specific urban tactics, techniques, and procedures. CHS helps maintain the health of urban forces, thereby conserving that trained manpower. This environment has had three to six times greater casualty rates than any other type environment. CHS operations that keep soldiers healthy and medically cared for reduce the strain on the replacement and evacuation systems. Such care allows soldiers to concentrate on the task at hand instead of the increased risks associated with UO.

9-54. As part of the overall LPT, commanders and medical planners analyze and continuously assess the urban area. They determine the medical threats, required medical resources, and the quality and availability of medical facilities and resources (to include civilian medical personnel). This assessment prevents duplicated services and permits more effectively and efficiently organizing medical resources. An analysis may indicate available hospitals, clinics, medical treatment facilities, and medical supplies and equipment (including production facilities) in the urban area. It may also indicate NGOs capable of providing medical services and supplies. Stringent federal regulations, standards of medical care, and a need for unavailable advanced technologies may limit their use by Army forces. CHS personnel keep abreast of the operational situation and its impact on CHS. Peace operations, for example, may rapidly transition to high-intensity offensive and defensive operations requiring medical support able to handle potential mass casualty scenarios.

Care of Civilians

9-55. In combat operations, the military normally does not provide injured civilians with medical care. Saving civilians is the responsibility of civilian authorities rather than the military. However, based on METT-TC and requirements under Geneva Conventions, commanders may need to recover, evacuate, and treat numerous civilians (particularly in urban support operations and some stability operations) until the local civilian medical personnel and facilities can be reconstituted and supplied. In urban support operations involving weapons of mass destruction, the primary focus of Army support may be CHS. If commanders provide medical support, they adhere to the UO fundamental of transitioning control and transferring responsibilities for medical care of civilians to another agency or into civilian hands as soon as is practical. In UO, commanders consider and address the medical treatment of civilians (enemy and friendly) early in the planning process. Any initial assessment or survey teams therefore contain CHS representatives. This assessment also considers cultural factors related to civilian medical treatment. Commanders may need to develop specific medical policies, directives, and standing operating procedures to ensure that subordinates know how much medical care they may provide to—

- The urban population.
- Other host-nation and third-country civilians.
- Coalition and host-nation forces.
- Contractor personnel.

Disease and Nonbattle Injury

9-56. DNBI is a major medical threat during all operations and UO will be no exception. Urban pollution hazards and potential exposure to TIM may increase the risk to soldier health. Some urban areas, particularly those in developing countries, are already large sources of communicable diseases, such as tuberculosis, cholera, typhus, hepatitis, malaria, dengue, and acquired immune deficiency syndrome (AIDS). Physical damage or deterioration of urban infrastructure—such as electricity, water, and sewage services and industries that use or produce hazardous materials—will only exacerbate these problems creating greater health risks. The density of the environment extends these risks to Army forces. Commanders establish a medical epidemiological surveillance system early. Such action continually assesses the health of the force and promptly identifies unusual or local occurrences that may signal preventive medicine problems or the influence of biological or chemical agents. These potential hazards, particularly the release of TIM, will influence the type of medical supplies needed by medical personnel and will also necessitate critical planning and preparation for potential mass casualties (civilian as well as military).

9-57. Adhering to the UO fundamental of preserving critical infrastructure may strongly influence decreasing DNBI. Preventive medicine personnel identify the diseases and recommend control and preventive measures. In urban areas, particularly during support operations and stability operations (and when specifically authorized), they may also conduct civilian health screening, health education, and immunization programs. Medical screening of military personnel, particularly multinational forces, may be required to

prevent introducing new diseases (especially drug-resistant strains) into an urban area. A new disease may tax the medical system and introduce a new medical problem into an area already in crisis. Lastly, field sanitation training (to include training in the use of barrier protection such as latex gloves when rendering care to any person and animal, rodent, and pest control), equipment, and supplies are part of overall preventive medicine measures and considerations.

Combat Stress

9-58. Stress occurs in every operation and type of environment; some stress is beneficial but too much is harmful. Controlled combat stress can invoke positive, adaptive reactions such as loyalty, selflessness, and heroism. On the other hand, uncontrolled combat stress can result in negative, harmful behavior and combat stress casualties. Such behaviors and casualties—battle fatigue, misconduct stress behaviors, and post-traumatic stress disorder—can interfere with the unit's mission. Physical and mental factors leading to combat stress result from the environment and the deliberate enemy actions aimed at killing, wounding, or demoralizing soldiers. However, many stressors are also generated from the soldier's own leaders and mission demands.

Combat Stress
Chechnya – 1994 to 1996

Russia's 1994-1996 conflict with Chechnya, a republic in the southwestern part of the Russian Federation, produced an increased number of psychological trauma and combat stress casualties. One medical survey found 72 percent of the soldiers screened had some sort of psychological disorder symptoms. Of that, 46 percent exhibited asthenic depression (a weak, apathetic, or retarded motor state). The other 26 percent exhibited psychotic reactions such as high states of anxiety, excitement, or aggressiveness and a deterioration of moral values or interpersonal relations. The statistics showed more troops experienced combat stress disorders than during their 1980s war in Afghanistan. One primary difference was that in Chechnya, Russian forces conducted combat mostly in cities rather than in mountains, valleys, and other rural areas.

Combat always invokes fear in soldiers. However, poor training and planning, uncertainty in their cause, and urban populations that resented their presence exacerbated the psychological climate for the Russian forces in Chechnya. Acts of subversion and terrorism by Chechen guerrillas kept the Russians in a constant, high state of readiness and anxiety; the soldiers viewed every civilian—young or old, male or female—as a potential enemy. This psychological pressure was not simply a by-product, but an objective of information operations and a prime reason for taking the fight into the close confines of Chechnya's urban areas. Torture and mutilation of prisoners; immediate execution of captured pilots; imitative electromagnetic deception (Chechens mimicked Russian radio transmissions and directed Russian close air support against their own forces); and propaganda to convince civilians that Russia's actions had a religious bias against Muslims and Islam were conducted to exert intense, unremitting psychological pressure on Russian forces—with great success.

The characteristics of urban areas combined with Chechen insurgent activities and information operations, civilians that did not welcome foreigners, and an unpopular and poorly supported conflict with an open-ended mission reinforced the need for the national will to strengthen and support the fight when forces deploy to urban areas. These characteristics also reinforce the need for clear objectives, proper leadership and training, and available medical assets able to properly diagnose and treat combat stress casualties.

9-59. In offensive and defensive UO, compartmented urban combat leads to physical isolation, difficulties in transmitting radio signals lead to communications isolation, and combined they create an overwhelming sense of being alone. Snipers, mines, and booby traps combined with the closeness and high intensity of urban combat contribute to an unremitting fear of attack from any quarter that further increases stress casualties. Additionally, seeing and perhaps accidentally inflicting casualties on civilians (especially women and children) increases battle fatigue. If civilians are hostile or a threat uses the population as cover and concealment, then the potential for misconduct stress behaviors often increases. Urban areas may provide temptations for looting, alcohol and substance abuse, black marketeering, and harmful social interactions; these temptations may increase misconduct stress behaviors. Leaders can prevent or rapidly identify, successfully manage, and treat stress-related casualties (see FM 22-51 and FM 6-22.5) and prevent misconduct stress behaviors as well as potential violations of the law of war. They provide training (both in urban combat and combat stress management), effective rules of engagement (ROE), unit cohesion, strong leadership, and mental health support. Leaders, forward on the battlefield, will determine whether discipline perseveres.

Evacuation

9-60. Transportation restrictions may preclude evacuation of urban casualties. Consequently, units may require more litter bearers to move the injured to a point where they can be further evacuated by ground or air ambulance. Lengthy evacuation routes will require more litter bearers, as multiple litter relay teams will be necessary to conserve energy and expedite evacuation. However, unless augmented or relieved of this responsibility by another unit, these litter bearers will come from the casualties' own unit thereby diminishing the unit's strength levels necessary to accomplish its primary mission. Depending on the expected level of casualties, commanders may augment units with additional personnel to perform evacuation or may assign maneuver units this mission. Historically, urban offensive and defensive

operations experienced more casualties than these operations in other environments. Evacuation personnel will require specific training in urban evacuation techniques (moving casualties from subsurface and supersurface levels to and along the surface level). Overall, urban commanders at all echelons develop detailed medical evacuation plans. Engineers are critical to clear routes for medical resupply and evacuation. Army forces may need the unique capabilities, equipment, and skills now typically seen in civilian urban search-and-rescue teams to clear debris and search for casualties. Specially trained dogs may also play a vital role in locating victims.

Treatment

9-61. First aid training will have increased significance in UO. The compartmented nature of UO, transportation restrictions, communications difficulties, and the finite number of combat medics may limit the urban casualty's initial treatment administered by nonmedical personnel or to self-treatment measures. Units identify and train combat lifesavers to perform in the absence of medics. Since the likelihood of Army forces performing UO continues to increase, commanders strive to meet or exceed Army standards for the number of combat lifesavers required for their specific unit. This increase in self, buddy, and combat lifesaver care, as well as longer delays in evacuation, may also increase requirements for additional first aid and medic-carried supplies.

9-62. In addition, the increased potential for delayed evacuation during UO mandates that Army combat medics be skilled in prolonged casualty care. (During the 3-4 October 1993 battle in Somalia, seven medics managed 39 casualties for more than 14 hours before they could be evacuated.) Evacuation delays significantly increase potential infection. Such delays may cause more casualties dying of their wounds; therefore, combat medics should also be skilled in administering antibiotics on the battlefield.

9-63. All CHS personnel can recognize and treat injuries due to incendiary or fuel-air explosives (also known as thermobaric weapons)—a favored, urban-oriented threat weapon (see Chapter 3). These weapons explode; create a cloud of volatile gases, liquids, or powders; and then ignite, creating an immense fireball consuming oxygen and creating enormous overpressure. When employed in an urban structure, the blast wave or overpressure is greatly amplified. Injuries resulting from these weapons are massive burns, broken or crushed bones, concussions, missile injuries, and internal injuries. Medics or doctors can easily overlook internal injuries (at least initially) unless they are trained, prepared, and expecting them.

9-64. The increased use of body armor during UO will help prevent penetrating chest and abdomen wounds. CHS personnel expect more groin, pelvis, and extremity injuries. Furthermore, when fighting soldiers that are known to use body armor, a threat (particularly snipers) can be expected to target the head and face more often than other anatomic areas resulting in more head injuries. Lastly, hearing loss may increase particularly when firing recoilless weapons in enclosed spaces with little ventilation.

EXPLOSIVE ORDNANCE DISPOSAL SUPPORT

9-65. Explosive ordnance disposal (EOD) support provides the capability to neutralize domestic or foreign conventional, nuclear, chemical, and biological munitions and improvised devices. Such devices threaten military operations and military and civilian facilities, materiel, and personnel. Unexploded explosive ordnance (UXO) creates a much greater risk during UO than operations in any other environment. Confined spaces, hard surfaces, and more personnel (both soldiers and civilians) in the vicinity may magnify the detonating effects of UXO. Dense terrain makes UXO more difficult to locate. In fact, terrorists select urban settings for their improvised explosive devices (IEDs) to potentially kill and destroy more, thus gaining greater visibility for their message. EOD units perform many tasks (detecting, identifying, rendering safe from, and disposing of explosives) associated with UXO and IEDs. Urban operations will rely more heavily on their role as advisors and instructors on UXO hazards, protection measures, and disposal techniques. EOD specialists will advise and train other Army forces, other services, multinational partners, and civilian authorities. EOD specialists will often work closely with public affairs and psychological operations personnel to increase awareness and teach the urban population to identify and avoid UXO.

HUMAN RESOURCES SUPPORT

9-66. Human resources support (HRS) encompasses the following functions: manning the force, personnel support, and personnel services. These activities include personnel accounting; casualty management; essential services; postal operations; and morale, welfare, and recreation provided to soldiers, their families, Department of Army civilians, and contractors.

9-67. Successful UO require HRS functions. Clearly, HRS focuses on caring for the needs of people: soldiers and the civilians who support them. Since a critical component of the urban environment is the population, these activities, when required, may also support them. For example, personnel elements may support accountability of displaced persons and civilian internees. In conjunction with mortuary affairs, casualty managers may assist with civilian death records and reports (always maintaining sensitivity to the confidentiality of casualty information). A postal company may assist urban officials in training and reestablishing civilian postal operations. Personnel elements may also provide identification cards and documents to support increased populace and resources control measures.

9-68. In offensive and defensive UO, HRS personnel will need to account for more casualties and more frequent reconstitution. In all UO, success relies on training individual replacements. Urban combat requires soldiers skilled in specific urban combat tactics, techniques, and procedures. They understand the societal aspects of the urban population and have training in crowd control to avoid escalating potentially explosive situations. Training these replacements while in the replacement system frees urban commanders from having to do so. It also helps reduce soldier

> *Urban operations will continue to be manpower intensive, even as advances in technology make the conduct of urban battle more precise and discriminating.*
>
> FM 1

(and supporting civilian) isolation, anxiety, and fear associated with urban areas and operations.

FINANCIAL MANAGEMENT OPERATIONS

9-69. Financial management operations make resources available when and where they are needed and assist the urban commander in maintaining fiscal responsibilities. Finance operations are necessary to conduct contracting and provide real-time information, accounting, and services. Resource management operations ensure that urban operational policies and procedures adhere to laws and regulations, develop command resource requirements, and leverage appropriate fund sources to meet them.

9-70. UO will likely include other US military services, governmental agencies, and contractors; multinational forces; NGOs; and various elements of the host nation. So many actors complicate financial accounting, resource management, and cost capturing. Yet, these activities are vital to accomplishing UO and maintaining legal requirements. Army forces will receive support from and provide support to these participants. Resource managers provide crucial "in-theater" expertise to the urban commander on the obligation authority. They also furnish the documentation necessary to obtain and pay for local goods and services using contract or commercial vendor services. However, commanders (with finance unit assistance) assess the economic impact of UO on the economy. Analysis includes how well the urban economics and commerce infrastructure can support the deployed force and how an influx of US currency may affect the overall economy.

9-71. Finance units can also provide joint pay support and non-US pay support for host-nation employees and day laborers supporting UO, as well as for civilian internees. These units can support bounty programs and solatia (financial compensation). Commanders use bounty programs to purchase weapons, radios, information, and other items from the urban inhabitants. They also use caution when paying for critical human intelligence. First, they ensure that multiple collection agencies in the command avoid paying the same source for the same information and interpreting these repeated inputs as validation that information is accurate and reliable. Second, they establish a price or pay scale so subordinate units (particularly in multinational UO) equally compensate their sources for information. Commanders may also need to make solatia to alleviate grief, suffering, and anxiety resulting from injuries and property or personal loss resulting from some aspect of UO. At other times, commanders make solatia to meet cultural expectations of the urban population. These payments are nominal in amount and without an admission of liability by the Army.

RELIGIOUS SUPPORT

9-72. Religious support entails providing and performing religious support operations for commanders to protect the free exercise of religion for soldiers, family members, and authorized civilians. This includes personal delivery of rites, sacraments, ordinances, pastoral and spiritual care, and religious education. Such support also consists of advising the commander on matters of religion, morals, and morale as affected by religion; the impact of local religions on the mission; and the ethical impact of command decisions.

Moral and Ethical Climate

9-73. Chaplains can help commanders sense the moral and ethical climate in Army units and understand potential moral dilemmas associated with planned UO. The urban environment affects soldiers' mental health and can increase combat stress casualties, especially misconduct stress behaviors. Chaplains are an important part of combat stress support. The chaplain's presence and faith sustains soldiers throughout periods of great trauma. Religious support contributes to the total well being of soldiers and aids in their return to combat readiness. Chaplains help bolster soldiers' moral and ethical behaviors through spiritual fitness training so that soldiers may better cope with ambiguous moral and ethical situations. Chaplains can help identify ethical concerns before they become critical command problems. To this end, their observations help develop and modify ROE, which—due to ambiguity or overly restraining rules—may be part of the problem.

Influence of Local Religions

9-74. Chaplains advise commanders on matters of religion as it affects the soldiers within their units. They also explain the influences of local religions on the urban populace and their potential effects on Army forces and UO. Religion is a crucial aspect of assessing the societal component of the urban environment. Understanding the major tenets and concepts of the religions and the impact of faith on civilians' lives may help commanders understand what motivates the populace. This understanding also helps commanders to appreciate the inhabitants' attitudes toward other races, religions, and cultures and to identify unacceptable kinds of social interaction (particularly between soldiers and civilians). Failure to recognize and respect religious beliefs can rapidly erode the legitimacy of the mission. A thorough analysis of the urban environment also includes the degree of influence religion and religious leaders have on the area's government, military, and economy.

LEGAL SUPPORT

9-75. Legal support provides operational law support in all legal disciplines (including military justice, international law, civil law—comprised of contract, fiscal, and environmental law, claims, and legal assistance). This support assists in command and control, sustainment, and HRS of UO. Legal considerations are important in any operation; they take on added significance during UO. They form the foundation for establishing ROE and are critical in the targeting process (determining protected targets, for example). They affect how units acquire goods and services from urban areas and provide support to other agencies and organizations operating in an area. The environment's complex nature requires commanders and their staffs to review and closely consider applicable legal constraints when developing and executing courses of action. Most urban areas have a highly developed legal system. The SJA support to commanders address this urban system and its potential to affect, positively or negatively, UO.

9-76. International, host-nation, and US law and other regulatory guidelines may vary in their applicability by time and place; actions permissible in one situation may be prohibited in another. These exceptions and complexities increase requirements for SJA, often working with CA personnel, to identify and resolve technical legal issues. Therefore, the SJA actively advises and

participates in all aspects of UO from predeployment training and initial planning through transition and redeployment. FM 27-100 contains detailed legal guidelines affecting UO.

International and Host-Nation Law

9-77. International law consists primarily of agreements, treaties, and customary law to include the law known as *the law of war* (see FM 27-10). The law of war consists of four general principles applicable when conducting any operation but requiring particular attention during UO. Figure 9-4 lists the four principles: military necessity, discrimination (or distinction), unnecessary suffering (or humanity), and proportionality.

Military Necessity: The principle that justifies the use of measures not forbidden by international or domestic law necessary to rapidly achieve military objectives.

Discrimination: The principle of distinguishing between combatants (who may be attacked) and noncombatants (who may not be attacked).

Unnecessary Suffering: The principle that prohibits the use of weapons, projectiles, or other materials in a manner calculated to cause superfluous injury and unnecessary suffering.

Proportionality: The principle that injury to persons and damage to property incidental to military action, in the circumstances ruling at the time, must not be excessive in relation to the ncrete and direct military advantage anticipated.

Figure 9-4. General Principles of the Law of War

9-78. International law may affect urban operational issues, such as the right of entry, base operations, use of urban infrastructure, and overflight and landing rights. Status-of-forces agreements (SOFAs) exist or can be negotiated to resolve legal issues, such as the status of soldiers operating in foreign areas to include criminal and civil jurisdiction, taxation concerns, and claims for damages and injuries. Unless a SOFA or other convention exists, soldiers operating in foreign urban areas have the same legal status as tourists; they are subject to the laws and judicial process of the host nation. Commanders are responsible to understand the international and host-nation agreements and laws that influence foreign UO. If local law hinders the operation, commanders may be able to inform the local US diplomatic mission and request that it negotiates a solution.

US Law

9-79. UO also comply with US law whether it is in the form of a statute, executive order, regulation, or other directive from a federal branch or agency. US law influences UO by governing the acquisition of supplies and services for Army forces, regulating the assistance that can be rendered to foreign nations, and controlling intelligence activities. The Posse Comitatus Act, for example, makes it a crime for Army forces to enforce civil law. Similarly, portions of the Foreign Assistance Act prohibit soldiers from performing law enforcement activities in foreign urban areas. However, circumstances—expressly authorized by the Constitution, acts of Congress, and other exceptions to these statutes—exist that allow the Army to support civilian law

enforcement. Although not nearly all-inclusive, the above demonstrates how US law further complicates urban operations, particularly stability and support, and increases the need for SJA advice and counsel in all facets of UO.

Legal Aspects of Nonlethal Force

9-80.Nonlethal capabilities can augment the means of deadly force and extend urban firepower options. They enhance the commander's ability to apply force in proportion to the threat and to allow discrimination in its use. The range of nonlethal capabilities includes offensive information operations, smoke and obscurants, irritants (such as chemical riot control agents), nonpenetrating projectiles, and high-pressure water devices. These continually expanding capabilities give commanders more options to confront situations that do not warrant deadly force but require soldiers to employ overwhelming decisive power. However, nonlethal capabilities are subject to the same legal constraints as lethal force (in fact, some nonlethal capabilities can cause serious injury and death, particularly if not employed properly) and undergo the same legal review. Like lethal force, nonlethal capabilities show military necessity, distinguish between combatants and noncombatants, distinguish between military objectives and protected property, are used proportionally, and do not result in unnecessary suffering. Commanders cannot employ chemical herbicides or riot control agents without prior presidential approval.

BAND SUPPORT

9-81. Bands provide music to instill in Army forces the will to fight and win. Bands also foster the support of multinational partners and urban populations through support to ceremonies, troop support functions, concerts, protocol functions, and religious ceremonies. Army bands quickly and effectively communicate professionalism, a positive image, and a nonthreatening show of force. Throughout the spectrum of operations, planners consider band support when developing their information operations concept of support to UO. Because UO are often resource intensive, band members may be required to assist in other essential activities unrelated to music. Such tasks may include casualty evacuation; command post security; and NBC reconnaissance and decontamination.

GENERAL ENGINEER SUPPORT

9-82. General engineer support will be essential during UO. This support helps assess, construct, maintain, and restore essential LOCs and urban facilities to sustain Army forces, the urban population, or both. Using civilian resources and investing Army general engineer resources requires careful consideration by commanders and staff planners. Since all elements of the urban infrastructure interconnect, general engineering support touches each category to some degree. Figure 9-5 illustrates how urban-specific, general engineering tasks align primarily with the transportation and distribution, energy, and administration and human services components of the urban infrastructure. These engineering tasks are significant and readily apply to UO. The last two, providing fire fighting support and waste management, have not been previously addressed and require more specific consideration.

THE USE OR INVESTMENT OF RESOURCES

9-83. During urban offensive and defensive operations, Army engineer units accomplish tasks to sustain or improve mobility, survivability, and sustainability of US and allied forces. These units maximize the existing urban facilities, host-nation support, civilian contractors, and joint engineer assets. Commanders consider how using urban facilities to support military forces may negatively affect the population. On the other hand, construction and repair may benefit both Army units and the urban inhabitants. Restoring the urban transportation network not only improves military LOCs, but may also allow needed commerce to resume. Repairing urban airfields or ports increases throughput capabilities for military supplies, facilitates medical evacuation operations to the support base, accelerates needed relief efforts, and allows international commerce to proceed. Commanders may first invest resources and conduct general engineering tasks to restore facilities for civilian use. Such actions stem future drains on operational resources or to facilitate later transition of control back to civilian authorities. For example, repairing police stations, detention facilities, and marksmanship ranges may help urban governments reestablish law and order after completing urban offensive or defensive operations. During most support operations and some stability operations, the focus of general engineering clearly supports and assists the urban population rather than sustains Army forces.

Construct, Maintain, or Restore

- Roads and Highways
- Over-the-Shore Facilities
- Ports
- Railroad Facilities
- Airports and Heliports
- Fixed Bridges
- Electric Power Facilities
- Petroleum Pipelines and Storage Facilities
- Water Facilities

and Provide

- Mobile Electric Power
- Construction Support
- Fire Fighting Support
- Waste Management

Figure 9-5. General Engineer Support

FIRE FIGHTING SUPPORT

9-84. Fire protection and prevention, as well as fire fighting, takes on added significance during UO, particularly offensive and defensive operations. Most ordnance affects by heat and flame. This, coupled with an abundance of combustible material (buildings, furniture, gasoline, oil, and propane), poses a serious risk to soldiers, civilians, and the urban operation. Large shantytowns can exacerbate this problem. In highly combustible areas, commanders may even need to limit or preclude the use of small-arms tracer ammunition.

9-85. When analyzing the administration and human services component of the infrastructure, commanders determine the adequacy of existing civilian fire fighting support. A deteriorated or nonexistent infrastructure that cannot support the urban area will likely fail to handle the increased risk due to military operations. Commanders may need to provide fire fighting teams to support their own forces and civilians.

9-86. A military force task organized with multiple fire fighting teams (even with maximum use of available civilian fire-fighting assets) will only be able to fight some fires in the AO. Water distribution systems damaged during operations, chemical and other TIM, and hostile activities will further complicate and limit fire fighting capabilities. Commanders develop priorities for equipment, facility, and infrastructure protection. All soldiers need training in fire prevention and initial or immediate response fire fighting. Such training includes planning covered and concealed movement, withdrawal, and evacuation routes. Soldiers are trained to identify and remove ignition and fuel sources and be provided additional fire fighting material such as extinguishers, sand, and blankets (see FM 5-415).

WASTE MANAGEMENT

9-87. Management of all forms of waste, particularly human, putrescible (such as food), and medical, may become a critical planning consideration for Army forces. This particularly applies if the urban waste management infrastructure was previously inadequate or damaged during UO, the Army force is operating in the urban area for an extended period of time, and a significant number of the urban population remains. Failure to adequately consider this aspect, possibly coupled with an inadequate water supply, may create unacceptable sanitary and hygiene conditions and subsequently increase DNBIs as well as civilian casualties.

CIVIL-MILITARY OPERATIONS

9-88. Commanders use civil-military operations (CMO) to establish, maintain, influence, or exploit relations to achieve operational objectives. These relations are among military forces, civilian authorities and organizations (both governmental and nongovernmental), and the civilian population. Because of the urban society's link to other aspects of the urban environment, CMO will prevail in all UO. Commanders may need to assume temporary responsibility for functions and capacities of the urban government. Although unstated, civil-military cooperation, particularly during urban stability operations and support operations, will be an essential, implied task of the mission. Like public affairs, effective CMO is based on establishing and maintaining credibility and trust with the urban populace and civilian organizations operating in the urban environment.

CIVIL AFFAIRS

9-89. CA units will be critical during UO. While any military force can conduct CMO, CA units are specifically organized, trained, and equipped to conduct activities in support of CMO. They have experience in planning and conducting CMO, a regional focus (which includes enhanced cultural awareness and language training), and civilian technical expertise. Such experience ensures relevant support to commanders conducting urban operations. CA units organize their capabilities into 16 functional skills normally arranged in four specialty function teams (see Figure 9-6). Commanders use these skills, often unfamiliar to most military personnel, to—

- Develop their situational understanding of the urban environment (particularly the infrastructure and society).

- Plan CMO to support UO.
- Achieve many of the fundamentals of UO shown in Chapter 5.

Figure 9-6. Civil Affairs Functional Skills

9-90. In addition to providing essential information for assessing the urban environment, CA personnel and activities help shape the battlefield, dominate a civil problem, and transition to a legitimate civil authority. Specifically, CA units and CMO help urban commanders—

- Minimize civilian interference with UO and the impact of urban operations on the populace and infrastructure. CA personnel can help establish and run a civil-military operations center to coordinate UO with civilian agencies (both governmental and nongovernmental), other services, and multinational partners.
- Provide advice and assistance to restore or rehabilitate portions of the infrastructure, particularly life-sustaining portions of the administration and human services component of the infrastructure.
- Plan, supervise, and execute necessary populace and resources control measures (in close coordination with military police units) until no longer required or the urban operation is completed.
- When requested or when military necessity or legitimate directives require, establish all or portions of the civil administration.
- Determine available supplies and services in the urban area and if necessary assist in negotiating their acquisition. They also help commanders assess the capability, dependability, and willingness of urban sources to provide and sustain identified needs as well as to calculate the impact of using them on other aspects of the urban environment.
- In conjunction with the SJA, fulfill the Army's responsibilities toward the urban population under international, host-nation, and US law.
- Plan and conduct the transition of control for the urban area or operation to another military or civilian governmental or nongovernmental organization or agency.

9-91. Similar to public affairs operations, CMO are related to information operations (see Chapter 4). The nature of CMO and the need for CA personnel to develop and maintain close relationships with the urban population put CA personnel in a favorable position to collect information. CA personnel work daily with civilians, their equipment, and their records that may be prime sources of information. If used correctly, CA personnel can complement the intelligence collection process, especially human intelligence, necessary to understand the dynamic societal component of the urban environment and detect significant changes. However, CA personnel are not, and cannot appear as, intelligence agents; otherwise, it will undermine their ability to

interact with the civilian community. Examples of information available to CA units include government documents, libraries, and archives; files of newspapers and periodicals; industrial and commercial records; and technical equipment, blueprints, and plans.

ASSESSMENT OF CIVIL CONSIDERATIONS

9-92. As part of the initial planning process, CA units conduct an area assessment, which can provide commanders with essential information about the environment. Commanders integrate this initial assessment into the overall urban IPB process (see Appendix C, FM 41-10). To help analyze civil considerations, commanders and staffs can consider many characteristics such as physical terrain, structures, capabilities, organizations, people, and events. These characteristics easily align with terrain, society, and infrastructure; and, like them, they are overlapped and interdependent (see Figure 9-7 and FM 6-0).

9-93. Overall, CA personnel help commanders understand the complexities of the infrastructure and societal components of the urban area. These components (together with the terrain or physical component of the urban area) interconnect. CA forces help identify and understand the relationships and interactions between these urban components. From this understanding, commanders can anticipate how specific military actions affect the urban environment and the subsequent reactions. CA personnel consider the short-term effects and reactions as well as the long-term consequences. Understanding these long-term consequences helps ensure a smooth transition of the urban area back to civilian control.